

Features

Body Material

# Compact & Universal Stainless Steel



Compression Load Cell (TC-FR) / Tension Load Cell (TT-FR)

### Benefit

Easy to install on the existing facilities/systems.

### Vacuum compatible

Works in vacuum state.  
(TC-FR custom design model)

### Durable Robot Cable standardized

Enhanced durability against bending that occurs in moving parts with frequent repetitive motion, such as industrial robots and machine tools. High stability and reliability are realized.

### Plug & Play with built-in TEDS

With the TD series indicators, equivalent input calibration, likely to forget in manual setting, can be performed automatically and help prevention.  
(See the reverse page for detail on TEDS)

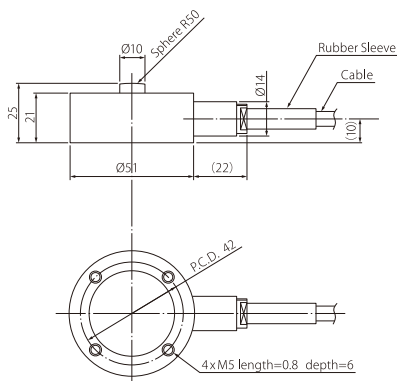
### Specifications

Type	Compression Load Cell						Tension Load Cell				
Model	TC-FR(T)□□N/KN-G6						TT-FR(T)□□N/KN-G6				
	<div>TEDS (Embedded in the body)</div> <div>RoHS (10 substances)</div>						<div>TEDS (Embedded in the body)</div> <div>RoHS (10 substances)</div>				
Rated Capacity (R.C.)	500N	1kN	2kN	5kN	10kN	20kN	500N	1kN	2kN	5kN	10kN
Natural Frequency	3.6kHz	5.0kHz	6.0kHz	7.0kHz	10.0kHz	TBA*	3.6kHz	5kHz	6kHz	7kHz	10kHz
Weight	230g	230g	230g	230g	230g	230g	0.24kg	0.24kg	0.24kg	0.24kg	0.24kg
Safe overload rating	150 % R.C.						150 % R.C.				
Rated Output (R.O.)	2mV/V ±1%						2mV/V ±0.5%				
Linearity	0.15% R.O.						0.15% R.O.				
Hysteresis	0.1% R.O.						0.1% R.O.				
Repeatability	0.05% R.O.						0.05% R.O.				
Safe Excitation Voltage	15V						15V				
Input Terminal Resistance	425Ω ±50Ω						425Ω ±50Ω				
Output Terminal Resistance	350Ω ±5Ω						350Ω ±5Ω				
Insulation Resistance	1000MΩ (DC 50V)						1000MΩ (DC 50V)				
Compensated Temperature Range	-10°C to 70°C						-10°C to 70°C				
Permissible Temperature Range	-10°C to 70°C						-10°C to 70°C				
Temperature Effect on Zero Balance	0.05% R.O. / 10°C						0.05% R.O. / 10°C				
Temperature Effect on Output	0.1% R.C. / 10°C						0.05% R.C. / 10°C				
Cable	Φ6, 6-core shielded, 5m direct connection robot cable with bare lead wires						Φ6, 6-core shielded, 5m direct connection robot cable with bare lead wires				
Mounting Method	Screw hole, Base Plate						Male screw (M12)				
Body Material	Stainless Steel						Stainless Steel				

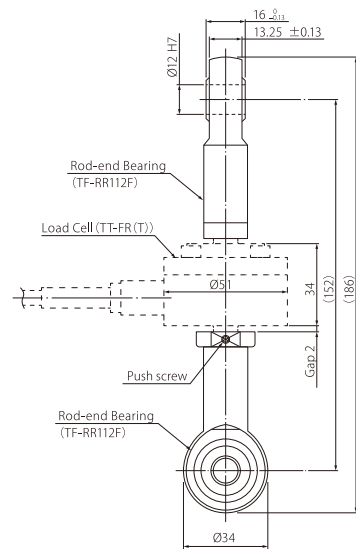
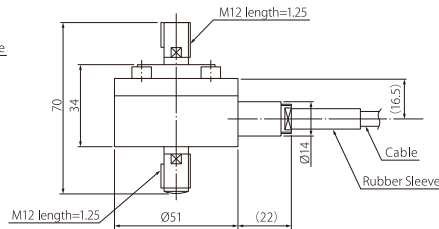
\* Please contact us for more details.

Dimensional drawings (Units: mm)

#### TC-FR-(T)□□N/KN-G6

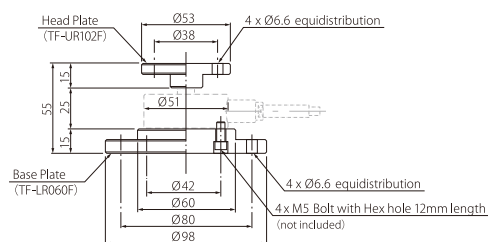


#### TT-FR-(T)□□N/KN-G6



Rod-end connection

#### Head Plate and Base Plate



Model No.	Head Plate (Weight)	Base Plate (Weight)	Bolt with Hex hole
TC-FR(T)-G6 500N	TF-UR102F (approx. 0.13kg)	TF-LR060F (approx. 0.6kg)	M5 x 12
TC-FR(T)-G6 1kN			
TC-FR(T)-G6 2kN			
TC-FR(T)-G6 5kN			
TC-FR(T)-G6 10kN			
TC-FR(T)-G6 20kN			

#### Related Products (Indicators and Signal Conditioners)



**New**  
EtherNet/IP™ model  
CC-Link model

92 x 92mm  
Panel opening size

Color Graphics Digital Indicator

#### TD-9000T

RS-485 model  
EtherNet/IP™ model  
CC-Link model

#### High performance model with large LCD

Supporting two inputs, force sensor and displacement sensor, various comparison judgments function, and direct saving of waveform data onto large capacity internal memory.

TEDS	RoHS	4.3" LCD
Touch Panel	5,000 time/sec.	24-bit
Load/Vary Inputs	Waveform	Static Strain
Interrupt Check	High/Low Limit Compare	Judgements
D/A OUT	RS-232C	Bilingual

CC-Link EtherNet/IP



92 x 45mm  
Panel opening size

Digital Indicator

#### TD-700T

Standard model  
CC-Link model  
RS-485 model

#### Excellent model with compact and high functionality

Supporting five key functions in one unit, numeric display, graph display, TEDS function, static strain display, and signal conditioner. This small and cost-effective TD-700T achieves equal or even higher performance to upper-class models, with high-visibility color LCD and various hold functions.

TEDS	RoHS	4,000 time/sec.	24-bit
Static Strain	Waveform	Bar Meter	D/A OUT
Data Rec	Various Holds	Bilingual	AC/DC Power

CC-Link



Attaches to common DIN rails

Signal Conditioner

#### TD-SC1

D/A model  
RS-485 model

#### Slim and light-weight signal conditioner

Supporting high-speed sampling of 20,000 times/second, PC-based configuration via USB connection, selectable network, and TEDS calibration function.

TEDS	RoHS	Plug-in
20,000 time/sec.	24-bit	Static Strain
Bilingual	High/Low Limit Compare	Hold Functions

CC-Link EtherNet/IP

\* Under planning



Weighs only 320g (incl. batteries)

Portable Digital Indicator

#### TD-01 Portable

#### On-site checking tool with versatility

Supporting various functions that equal to embed systems, in hand-held size, allowing you to take measurements anytime anywhere, according to your purpose.

TEDS	RoHS	Color LCD
Waveform	Bar Meter	High/Low Limit Compare
Data Rec	Static Strain	Interrupt Check
D/A OUT	Dual I/O	24-bit
AA Batteries	Long Time Operation	Bilingual

CC-Link

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